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Abstract

A machine part with a conical effective surface, which is machined by means of a device comprising a machine bed, a longitudinally movable grinding bench, and a workpiece spindle head that clamps the machine part by means of clamping jaws via a chuck. The conical effective surface of the machine part is ground by means of a first grinding disk in a vertical grinding mode by longitudinally moving the grinding bench in the direction of the longitudinal axis. The associated grinding spindle head is provided with a first grinding spindle for the first grinding disk and a second grinding spindle for a second grinding disk that is fixed to a grinding arbor. The grinding spindle head is fixed to a grinding spindle carriage so as to be pivotable around a vertical shaft, the grinding spindle carriage being movable in the direction of the x-axis via a displacement motor. The first grinding disk can be driven out of the area of the machine part while the second grinding disk can be made to act upon the machine part in order to internally grind a longitudinal borehole.